ABSTRACT OF THE DISCLOSURE

A liquid composition comprising a colloidal suspension of a biomolecule-binding matrix material (preferably nitrocellulose) dispersed in a liquid, with particles of the matrix material being of a defined particle size, and replicate copies of a biomolecule, e.g., protein or nucleic acid probes, which are distributed, preferably uniformly, throughout the colloidal suspension and are bound to the matrix material particles, is disclosed. The liquid composition of the invention can be used directly for sample analysis or preparation of biomolecules, or aliquots of the composition can be spotted onto a support to form a microporous matrix system or microarray for analysis or preparation of biomolecules. Compositions and microarrays according to the invention are useful in any type of analytical or preparative procedure relating to biomolecules. They are particularly useful, e.g., in methods for detecting a biomolecule analyte in a liquid sample, methods for determining the presence of a particular nucleic acid sequence within a liquid sample and methods for determining the presence of a drug candidate molecule in a liquid sample. The invention further comprises kits for practicing the various methods of the invention.

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